

AWESOME UNIVERSE:

Questions and Answers for discussion groups

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DVD 1 : Creation

1.1: SIZE AND AGE OF UNIVERSE

Q: What is a Light Year?

A: It is the distance that light travels in one Earth year.

Q: How fast does light travel in a vacuum?

A: 300,000 kilometers each second.

Q: What is a galaxy?

A: It is a collection of stars that are separated from other similar collections of stars.

Q: How many stars are found in an average sized galaxy?

A: About 250 billion stars like our own sun.

Q: What is the average distance across one galaxy?

A: About 100,000 Light Years

Q: What is the distance to the galaxies furthest from our own galaxy?

A: About 12 billion Light years.

Q: For how many Earth years has light reaching our telescopes, been traveling through Space, from galaxies about 12 billion Light years away?

A: This light has been traveling towards our telescopes for 12 billion earth years.

Q: How do scientists calculate when the Big Bang Creation took place?

A: They can measure the speed of expansion of our present Universe and then calculate how long it took to reach this size, from its beginning.

Q: The Big Bang was started and controlled by laws that existed before our Universe. What do we call such laws?

A: We call them Transcendent Laws.

Q: When did time begin?

A: Science tells us that time began at the Big Bang.

Q: Are the Transcendent Laws limited by time?

A: No, these Transcendent Laws operate in a Timeless Dimension

Q: Who does the Bible say created the Universe?

A: God (Bible: Genesis 1:1, Isaiah 42: 5, John 1: 1-3)

Q: Does the Bible say that God exists outside of time?

A: Yes. He is described as existing ‘from timelessness to timelessness’ or ‘from eternity to eternity’ (e.g. Bible: Psalm 90:2)

Q: Does the Bible say that God existed before our Universe came into existence?

A: Yes, in several places it says that he was ‘before all things’ and ‘by Him all things came into existence’ (Bible: Genesis 1:1, Proverbs 3:19, Isaiah 42: 5 John 1: 1-3))

1.2: QUANTUM PHYSICS AND TIMELESS DIMENSION

Q: What does the science of Quantum physics (Quantum mechanics) study?

A: It studies the minute particles that form atoms, that in turn form the matter of our Universe. Science has given these minute particles names like quarks, leptons and gauge bosons.

Q: Is all the matter in our Universe, including our own bodies, made up from atoms?

A: Yes, various types of atoms are the building blocks of our Universe.

Q: Can we see atoms with our naked eyes or a microscope?

A: No, atoms are far too small to be seen, even with a microscope and can only be studied with specialized instruments, such as Particle Accelerators.

Q: Why do scientists talk of ‘non-locality’ or ‘entanglement’?

A: Because sub-atomic particles behave as if they can instantaneously communicate and interact with each other, even if separated by enormous distances.

Q: How many dimensions make up our experience of the Universe?

A: There are four basic dimensions, namely length, width, height and time

Q: Why do we need to believe in another dimension called the Timeless Dimension?

A: We need a Timeless Dimension in order to explain the instantaneous communication of sub-atomic particles over vast distances and to explain the Transcendent Laws that initiated the Big Bang Creation.

Q: Is the space between stars and galaxies actually empty?

A: No, it is actually filled with a mysterious energy that science has called ‘Dark Energy’.

Q: Do we know how much Dark Energy there is in the Universe?

A: No, but some calculations can be made from the observed effects this energy produces. Some of these calculations suggest that this energy could be ‘infinitely great’!

1.3: THE CREATOR?

Q: Can we ever get something from nothing?

A: No, We can never get something from nothing.

Q: What is the statistical probability that our Universe is the result of pure chance?

A: Science has calculated this as less than 1 in 10^{55} .

Q: What example can help you visualize how minute is the statistical probability that we are here by accident?

A: Illustrations such as covering the whole of the USA with a great mountain of coins, piled up to the moon. If, in this great pile we are told that there is just one coin different from the rest, the chance of finding this coin is something like 1 in 10^{55} .

Q: Science tells us that time and the matter of our Universe came into existence at the Big Bang Creation. What existed before the Big Bang?

A: Before the Big Bang there was a Timeless Dimension that has its own Laws.

Q: If some things existed before the Big Bang Creation, what do we call these things?

A: Anything that existed before the Big Bang is called 'Transcendent'.

Q: Does this mean that the Timeless Dimension and its laws are 'transcendent'?

A: Yes, logically they have to be transcendent.

Q: Does this mean that the Big Bang Creation came out of the Timeless Dimension, and the Transcendent Laws that operate in that dimension?

A: Yes, logic seems to tell us that the Big Bang obtained its incredible fine-tuning from the operation of these Transcendent Laws.

Q: What other evidence suggests that our Universe is controlled by the Timeless Dimension?

A: Our Universe must be controlled by the Timeless Dimension because the microscopic particles that make up the matter of our Universe, all behave in timeless ways, with instantaneous communication and action over vast distances.

Q: Because our Universe is controlled by the Timeless Dimension, does this mean that the laws of physics, that operate in our Universe, are ultimately controlled by the Transcendent Laws of the Timeless Dimension?

A: Yes, this seems to be the case. This can help us understand some of the great unanswered questions of science, such as what exactly is light, what is matter and what is gravity?

Q: Does this mean that God is in control of every detail in our Universe?

A: Yes, since he exists in the Timeless Dimension and this dimension controls the atoms that make up our Universe.

Q: Can God actually control every detail of the history of our Universe?

A: Yes, he can be described as being 'in all things, through all things, and by him all things are held together'.

Q: When we study the activity of sub-atomic particles, they seem to behave in a chaotic manner. Is this really chaotic or merely our time-based view of a Timeless reality?

A: It seems to be chaotic because our time-based instruments can only see one aspect of any reality that operates outside of time.

Q: Is the apparent 'chaos' in the sub-atomic reality very sensitive to inputs of energy?

A: Yes, science gives the illustration of a tiny butterfly or bird wing beat in Japan, starting a chain reaction that could end up as a hurricane in Mexico.

1.4: THE AGE OF OUR EARTH

Q: How old, according to science, are the oldest rocks on Earth?

A: At least 3.5 billion years old.

Q: How do we study the age of rocks?

A: By radiometric dating of radioactive materials in the rocks. The different types of radioactive minerals give off particles of energy as radiation and this changes the structure of the parent mineral. The rate that this radiation is given off is different for each mineral type. The rates of decay of more than six of these minerals have now been studied in laboratories for over 100 years. The time it takes for half of the mineral to change to its new form is called its 'half life', and these 'half lives' are very different for each radioactive mineral. By measuring how much of these minerals have changed in a rock, we can obtain an approximate time since the mineral was originally formed.

Q: Is it possible that the rate of radioactive decay could have been much faster previously and so give us the impression that rocks are much older than they actually are?

A: There may have been slight variations in the rate of radioactive decay but not enough to shrink a 3.5 billion year old rock to a mere 6000 years, as some would suggest.

Q: Why is it not possible to speed up radioactive decay more than slightly?

A: To reduce a 3.5 billion year old rock to a mere 6000 years would mean speeding up radioactive decay by at least 500,000 times. Since each decay gives radiation and radiation causes heating, such a massive speeding up of radioactive decay would have reduced our Earth to a ball of molten rock. This would certainly not be a planet suitable for life.

Q: About how fast do continents move?

A: About 5 cm per year at the most. Some of these movements have been very accurately measured from instruments on satellites above the Earth.

Q: How long would it have taken Africa and South America to move apart?

A: About 160 million years.

Q: Do these movements of continents cause earthquakes?

A: Yes, this is one major cause of earthquakes.

Q: Does the distribution of animals and plants support evidence for continental drift?

A: Yes, Each continent has different animals and plants, depending upon when that continent broke free from the original single landmass.

Q: Why does Australia have many species of marsupial animals but no placental mammals?

A: This is because Australia broke free from the original Gondwana landmass before placental mammals were on the earth.

Q: What creates the oxygen in our atmosphere?

A: It is mainly created by the process of photosynthesis in green plants.

Q: Approximately how long would it have taken for the oxygen levels to rise to the present level, if the Earth was covered with green plants?

A: Science calculates this to be at least 300 million years.

Q: What is coal made from?

A: It is from dead and compressed plant material.

Q: Did it take thousands of years or millions of years to create our coal deposits?

A: It took millions of years. We can see this from observing how the different types of coal are formed.

Q: Are coal deposits (seams) typically in one layer or in several layers, separated by other types of deposits?

A: Seams are often in several layers, each several meters thick and separated by other deposits.

Q: Could these layers have been caused by only one geological or catastrophic event?

A: No, the evidence confirms that coal was formed over long periods of time and during several coal forming periods.

Q: What are continents floating on?

A: On molten rock called Magma.

Q: As mountains are slowly eroded away by weather, do they rise?

A: Yes, eroded areas do slowly rise because continents are floating on the Magma.

Q: What evidence do we have that mountains slowly rise?

A: One evidence, out of many others, is that we sometimes find fossil seashells high above sea level. Another evidence is that Europe is still slowly rising, due to removal of vast ice sheets that covered the area during the last Ice Age, some 10,000 years ago.

Q: How many years of accumulated snow have been drilled through in Antarctic ice?

A: At least 800,000 years.

Q: How do scientists know the age of ice removed from cores drilled down into Antarctic ice?

A: The ice cores show differences in the quality of summer and winter snowfall, that built up the ice sheets. By counting the number of winter deposits they can say how many years they are drilling through. Also, volcanic ash deposits from eruptions, dated by history, act as independent references to dating of ice core layers.

Q: What do we find in Antarctic rocks below the ice?

A: Fossil animals, including amphibians that used to live in warm climates.

Q: What do these fossil amphibians tell us about Earth's history?

A: These fossils tell us that life was present in this area more than 800,000 years ago. They also tell us that continental drift has taken place, because Antarctica must previously have been situated closer to the warmer tropics.

Q: What is your conclusion: Are our continents only thousands of years old or are they millions of years old?

A: All these lines of evidence, including radiometric dating, continental drift, the distribution of animals on different continents, the rate of oxygen formation in our atmosphere, the formation of coal deposits, the rate of erosion and mountain upliftment and the evidence from ice cores, all show that the rocks are millions of years old. In fact the oldest rocks containing animal fossils are about 600 million years old.

DVD 2: Irreducible complexity

2.1: UNDERSTANDING THE THEORY OF EVOLUTION

Q: What is Charles Darwin most famous for?

A: His 1859 book that proposed The Theory of Evolution.

Q: Did Darwin believe in God?

A: Yes he did. He ends his book with the words, *There is grandeur in this view of life, with its several powers, having been originally breathed **by the Creator** into a few forms or into one; and that, whilst this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been, and are being evolved.* Unfortunately some later reprints of Darwin's book have deliberately removed the word 'Creator' from the text!

Q: Does science know how the first life appeared on Earth?

A: No, in spite of much research over many years.

Q: Since the time of Darwin, has science revealed life to be simpler or more complex than understood by Darwin?

A: Our understanding of the 'simplest' life forms has revealed amazing complexity. We now realize that there is no such thing as a 'simple' living thing. A single celled organism is composed of many complex systems, all of which have to be present simultaneously in order for that life form to exist, feed itself, duplicate itself, get rid of waste products, and perform a host of complex chemical reactions.

Q: What is the genetic code of all life?

A: It is a complex chemical called DNA

Q: What is the DNA made up from?

A: DNA is made up from various combinations of four chemicals called 'base pairs' that join together into a double helix structure.

Q: Is the DNA of all animals the same?

A: NO, each type of animal has a different arrangement of 'letters' (base pairs) in the DNA.

Q: Do we have the same amount of DNA in each of our cells as is found in a single-cell bacterium?

A: No, we actually have about 1000 times more DNA in each body cell.

Q: How much information is stored in our human DNA?

A: It is equivalent to all the information found in 200 telephone directories, each 500 pages long!

Q: Why are children from the same parents usually all different in appearance and abilities?

A: This is because the DNA in each male spermatozoon and each female ovum is different. Therefore, each baby has a different combination of DNA.

Q: What is a mutation?

A: It is when a sudden change takes place in the DNA of an animal.

Q: Do mutations usually lead to new types of animals?

A: Most mutations are harmful and cause death but a few can lead to benefits that can be inherited.

Q: Are mutations chance events?

A: As far as we know they are purely chance events.

Q: Is environmental selection a chance event?

A: The environment selects those animals best suited to survive in specific conditions. Therefore this selection is not a purely chance process.

Q: Has science demonstrated that a species can develop over time into one or more other similar species?

A: Yes, there are many good examples of this sort of evolution.

Q: Do these new species have the same amount of DNA as their parent species?

A: Yes, there has only been a change in the order of 'letters' within the DNA.

Q: Is the Peppered moth an example of the environment selecting for change in a species?

A: Yes, these moths changed from pale colour to dark colour due to the Industrial Revolution making vegetation darker. Dark moths were better camouflaged against predators. This meant that more of the dark moths survived.

Q: What do the Black-backed Gull and Herring Gull demonstrate about evolution?

A: They demonstrate how one species can develop into another species.

Q: What are the Galapagos Island finches demonstrating?

A: They demonstrate how finches, blown by the wind to various islands, developed into separate species over time.

Q: How many species of Cichlid fishes are found in Lake Victoria?

A: About 200 species.

Q: How old is the Lake Victoria water system?

A: About one million years old.

Q: Does this mean that all these new species of Cichlid fishes developed within one million years?

A: Yes, it does seem to say that this is the case, because geological evidence shows that this lake system is less than one million years old.

Q: Do all these Cichlid fishes have the same amount of DNA genetic material in their body cells?

A: Yes. There are only tiny variations in the order of a few 'letters' on this DNA code, but this is enough to lead to new species.

Q: Because we can demonstrate evolution leading to new species, does this have to mean that the same process has led to all the variety of life on earth?

A: It is not certain that the same evolutionary processes can account for appearance of more complex creatures from more simple creatures.

2.2: WHAT DO THE FOSSILS TELL US?

Q: Do the fossils show a long series of intermediate fossils between major groups, such as between invertebrates and vertebrates or between fishes and amphibians or amphibians and reptiles?

A: No, the fossils show hardly any ‘missing links’, let alone the millions that should be there, according to evolutionary theory as traditionally understood.

Q: Are genetic studies increasingly questioning the ‘evolutionary trees’ previously proposed to link various categories of living things?

A: Yes, many of the previously proposed ‘evolutionary trees’ are having to be radically revised in the light of genetic studies.

Q: What geological period showed the greatest variety of new animals?

A: The Cambrian period of 600 million years ago.

Q: Did these Cambrian period fossils appear suddenly in the rocks or have we found older fossils that might have been ancestors to them?

A: This great variety of new life forms appeared suddenly and so far no ancestors to them have been found.

Q: Is this gap in fossils, before the Cambrian period, due to the fossil record being very incomplete?

A: Recent Cambrian period fossil finds have been made in Greenland, China, Siberia and Namibia and all show the same pattern of sudden appearance about 600 million years ago. This indicates that the sudden appearance of Cambrian fossils is not due to a poor fossil record, but it is rather a reflection of what actually happened.

Q: What does the fossil called *Archaeopteryx* tell us about the evolution of birds from reptiles?

A: Several fossils have been found of *Archaeopteryx* and they have modern bird features but also some features similar to one group of early reptiles. They seem to be somewhere on the line from reptiles to birds.

Q: What does the fossil of the *Coelocanth* fish tell us about evolution?

A: This fish was found in rocks 80 million years old, but then in 1938 living examples were caught in deep waters off South Africa. These living examples were identical to the fossils. This tells us that some species do not change over millions of years.

Q: A recent discovery was of a fossil called *Tiktaalik roseae*. Is this a ‘missing link’ between fishes and amphibians?

A: It is too early to be sure but it may be.

Q: Why have we only ever found this one example of an animal with fish and amphibian features?

A: This is either because the fossil record is poor for this period on earth, or else it tells us that fish changed to amphibians very rapidly, not by the slow step by step process proposed by the original Theory of Evolution.

Q: Recently a lemur-like fossil was found called *Darwinius masillae* and nick-named 'Ida'. Widespread publicity in the media hailed this as the 'missing link' between mankind and much more primitive animals. Was it actually a 'missing link'?

A: No, a few weeks later scientific literature revealed that it was just a new species of lemur and definitely not a 'missing link' on the road to man.

Q: What does this media hype about 'Ida' tell us about science and the un-scientific? public?

A: It tells us that some people seem desperate to prove that their understanding of evolution is correct. It also shows that these dramatic media headlines are not followed up by an equally prominent denial of the initial claim.

Q: How do strange animals like the Duck-billed Platypus make us cautious about claiming fossils to be 'missing links'? (They are warm blooded mammals with hair, but lay eggs, have webbed feet, and a duck-like bill).

A: This shows that animals can have features similar to other distantly related animals but they are not necessarily on the same 'evolutionary tree'. The Duck-billed Platypus is definitely not on an evolutionary tree between mammals and birds or birds and mammals, but if we only had a fossil of these animals some people might have been tempted to claim that they were a 'missing link' between these groups.

Q: What is the main difference between the evolution of one species from another and the evolution of a more complex animal from a more primitive one?

A: The main difference is that closely related species share the same amount of DNA, while more complex animals have more DNA and/or radically altered DNA

2.3: IRREDUCIBLE COMPLEXITY

Q: What do we mean by saying that an organ, such as the human eye, is 'irreducibly complex'?

A: We mean that the organ cannot function until nearly every part is in place. Therefore, it is hard to see what evolutionary process could have led to its development, since evolution is thought to proceed only if each minute change is of some benefit to the organism.

Q: For a complexity, such as the human eye, to develop from a simple light sensitive cell, it means that each minute step in its development would need to be selected for by some advantage to the animal. Do the fossils support such a development of the eye?

A: Theoretical stages in development of the eye are not shown in the fossil record. For instance, there were many fossils of the invertebrates, called Trilobites, without eyes and then suddenly they had complex eyes like modern insects, but with no intermediate steps.

Q: Are there many examples of ‘Irreducible Complexity’?

A: Yes, we not only see complex organs such as eyes and ears, but also thousands of complex enzymes and chemical reactions in living cells, all of which cannot function until all the many parts are present at the same time and in very specific order.

2.4: PERSONAL VIEWPOINT

Q: Does the discovery of processes and mechanisms do away with the need for a designer of the processes and mechanisms?

A: No, the statistical probability against these things coming together by chance is enormous.

Q: Does the existence of so-called ‘genetic upgrades’ between simpler and more complex organisms, suggest the intervention of the mind of God?

A: Many people would agree that the sudden appearance of greater complexity in the fossil record, does suggest the intervention of an intelligence, such as the Mind of God.

Q: How do you think God could have periodically brought about a ‘genetic upgrade’ and ‘jump started’ life in a new direction?

A: It could simply be by exerting the power of His mind, to give so-called ‘quantum chaos’ a tiny nudge in a specific direction, like the illustration of a butterfly wing beat in Japan causing a hurricane in Mexico. Alternatively, it could be a more ‘hands-on’ process, such as is described in the Bible when God made Eve from genetic material taken out of the living Adam.

Q: Does belief in God require a step of faith?

A: Yes, God cannot be proved scientifically. However, belief that there is no God can also not be proved. Both positions require a step of faith.

Q: Since the statistical probability of us being here by chance is so amazingly small, (smaller than 1 in 10^{55}) doesn’t this actually prove that God is real and is behind all the amazing discoveries of science?

A: To most people this is pretty close to proving that God exists.

Q: Is there an alternative view that removes the need for belief in God?

A: Some scientists have proposed the ‘Multiverse Theory’. This says that maybe there are or were an infinite number of possible universes and we just happen to be in the one where life is possible. Therefore, they will say, our Universe seems to be designed when in fact it is not.

Q: Is there any evidence for the Multiverse Theory?

A: There is no evidence, just theories.

Q: Is there evidence that God planned and brought into being our unique Universe?

A: Clearly the answer is ‘yes’, as shown by the statistical probability against chance, and as shown by many other lines of evidence, such as the examples of Irreducible Complexity’.

Q: What are some of the other lines of evidence in support of God?

A: There are people who have had amazing answers to prayer and many people who have real life experiences of God at work in their own life situations. There is also the evidence of Bible prophecies that have been fulfilled in great detail.

2.5: RELATIONSHIP TO ANCIENT DOCUMENTS

Q: What single event, about 200 years ago, started western civilization on a path away from belief in the Bible?

A: It was the Theory of Evolution and the way that this theory has been presented to the Public, by some scientists who have vigorously promoted it as a sort of ‘religion of the unbeliever’.

Q: Has the attitude of some religious people harmed progress?

A: Yes, some have stuck rigidly to the belief that our Universe and Earth were created in six earth days about 6000 years ago. This has resulted in many people losing their faith in the Bible.

Q: Does the Bible account of Creation allow us to believe in creation over long ages of time?

A: The Bible account can be translated in various ways, including ways that allow us to harmonize it with the revelations of science.

Q: What language was the Bible account of creation written in?

A: It was in Hebrew.

Q: Can the Hebrew word for ‘day’ be translated in various ways?

A: Yes, the word used is ‘yom’ and it can be translated as a ‘day’ or a ‘period of time’ or an ‘age’.

Q: In how many other places in the Bible is this word for ‘day’ translated as a ‘period of time’?

A: In 65 places the word for ‘day’ is translated as a ‘period of time, rather than a 24 hour day.

Q: In the Bible account, when God separated the night from the dark, what did he call the ‘light’ period?

A: He called this ‘day’. Here about half of a 24 hour period is called a ‘day’.

Q: In chapter one of Genesis, each creative ‘day’ is ended off with the words “*and there was evening and there was morning, the first day*”, and likewise for each of the six creative ‘days’. If this is referring to a 24 hour day, what portion of the day is spoken about here?

A: If it is speaking about a 24 hour day then this is calling the night portion a ‘day’.

Q: In chapter two of the Genesis account, how many events are included in one ‘day’?

A: An accurate translation of the Hebrew reads “*In the ‘day’ that the Lord God made the earth and the heavens, and every plant of the field before it was in the earth, and every herb of the field before it grew...*” Here the account includes several of the chapter one ‘days’ all into one ‘day’.

Q: How many different ways is the word ‘day’ used in the first two chapters of the Bible?

A: At least three different ways. Clearly it is unjustified to insist that it only be translated as a 24 hour day.

Q: Is there any reason why God cannot compare an earth day with a far longer period in his agenda?

A: There are other Bible passages that compare an earth day with longer periods in God’s agenda. For instance, in Psalm 90 “For a thousand years in your sight are like a day that has just gone by”.

Q: Can you give another example of God comparing a longer period with an earth day?

A: How about the prophet Ezekiel (Ezekiel chapter 4), being told by God to lie on his left side for 390 days and then on his right side for another 40 days. He was told by God that the 390 earth days represented 390 years that the nation of Israel had rebelled against their God.

Q: Is there any reason why God cannot call each of his great creative periods a ‘day’?

A: Clearly, even from biblical examples, we are entitled to conclude that the word for ‘day’ in the Genesis creative account, can be translated as a ‘creative age’.

Q: Are there words in the Creation account that suggest long periods of time?

A: There are Hebrew words that can be legitimately translated as: “*Allow light to appear*” or “*Allow the land to produce vegetation*”. These are descriptive of long processes.

Q: Is it acceptable to translate each Bible creative day as follows: *“Thus the end (evening) of the first ‘age’ (yom) came, and the dawning of the new ‘age’ (yom) began”*?

A: This is an acceptable translation and the same wording can apply to the end and beginning of each of the six creative ‘ages’.

Q: Is the order of creation, as outlined in the Genesis account, in agreement with the order revealed by science?

A: It is in remarkable agreement, provided we once again look at alternative translations for some of the Hebrew words.

Q: How do we reconcile the Genesis account where it says that on the fourth creative ‘day’ *“God ‘made’ two great lights – the greater to govern the day and the lesser light to govern the night. He also made the stars”*. These were for *“determining times and seasons”* Science tells us that the stars, sun and moon, were there long before this period on earth?

A: The Hebrew word used here for ‘made’ is ‘asah’. This can equally well be translated as ‘Appointed to their function’. This can be referring to the stage on earth where the thick cloud cover started to have breaks in it, as the earth cooled. For the first time the heavenly bodies could be seen by a theoretical observer on earth, and could become the means of ‘determining times and seasons’. We now know that most of life use the sun, moon and stars for determining breeding seasons, migrations and other seasons of life. Thus, in the fourth creative age the sun, moon and stars could ‘become appointed to their function’.

Q: In what creative period does the Genesis account say that birds appeared?

A: According to our English Bible translators, it was in the fifth period. This is earlier than science says birds appeared. However, the word translated as ‘birds’ in many Bibles, is actually the Hebrew word ‘oph’. This can be translated as ‘flying creatures’. Science tells us that abundant insect life, including giant flying forms, appeared in abundance when the seas first showed abundant fish life. This was before there were land animals. In other words the biblical description is very accurate, *“Let the water teem with living creatures, and let ‘flying creatures’ fly above the earth across the expanse of the sky”*.

Q: Does science agree that the early earth was covered with sea, as described in the Genesis account?

A: Yes, recent computer models of the early Earth suggest that at first there was just water and only later did land appear.

Q: Overall, is the Genesis account of creation a remarkable pre-scientific description of creation on Earth?

A: Most informed people agree that it is a remarkable account and is accurate in broad detail. It was not meant to be a scientific document.

DVD 3: HUMANITY

3.1: THE FLOOD

Q: What is the biblical date for a great flood in the time of Noah?

A: The Bible says this took place about 2456 BC.

Q: Where does archaeology place the origin of the first true civilization?

A: This is in the Middle East, somewhere around modern Turkey. Before this time there is evidence for construction of simple buildings and some agriculture, but not a complex civilization.

Q: When does archaeology say that the first civilization started moving out from its Middle East origin?

A: Civilisation started spreading outwards, from the Middle East Sumerian civilization, about 2000 BC. This led to the first civilization in China in about 1700 BC (Shang dynasty) and the first in America was only after 1000 BC (Mayas). There were earlier migrations of mankind to these areas, but all the true civilizations spread outwards from their Middle East origin, carried by new migrations of humans across the earth.

Q: At the biblical time of the great flood, where was civilization still located?

A: It was still restricted to a small area of the Middle East.

Q: Does the Bible say that the flood covered the whole world?

A: No, in the account, wherever it speaks of the water covering the earth, only two Hebrew words are used, namely 'adamah' or 'erets'. Throughout the Bible these words are usually translated as ground, land, and soil. In only four occasions, out of hundreds, are these words translated as 'world'. In other words, the Bible does not actually say that the flood covered the whole world.

Q: About how many types of mammals and birds are in the world?

A: About 3200 mammals and 8000 birds.

Q: How many species of insects are there?

A: At least 5 million species.

Q: Could fresh water organisms survive a world-wide flood?

A: No, because a world-wide flood would be saline like the sea.

Q: How many types of dinosaur have been discovered in the fossils?

A: More than 500 different types.

Q: How heavy were the biggest dinosaurs?

A: The biggest were about 100 tons or 20 times bigger than an elephant.

Q: Approximately how many square meter floor space was in the biblical Ark?

A: About 8,800 square meters, according to measurements given in the Bible.

Q: How long, according to the Bible, were Noah and the animals in the Ark?

A: Just over one whole year.

Q: What average requirement for fresh water would be needed for all the mammals and birds?

A: One liter per day would be a good overall average.

Q: How much fresh water would be needed by just 11,200 species of mammals and birds for one whole year?

A: At one liter each, this equals 4,200 metric tons or 4,200 cubic meters of Ark space.

Q: What percentage of Ark space would be taken up by fresh water?

A: About half of the total space in the Ark.

Q: How much food would be needed for all these animals for one whole year?

A: Even a small sparrow eats about 3 grams of feed per day. If all the 3200 mammals ate a very conservative 500 gm per day, this totals 584 tons for a year, and remember that herbivore animals eat bulky feed like dry grass that takes up a lot of space.

Q: Does logic require that the Ark was floating on fresh water and did not contain all the animals in the world?

A: Logic does require us to accept that water for the animals came from the water on which the Ark floated and the food that Noah was instructed to take on the Ark was for only a limited number of animals.

Q: What is the scientific explanation for very different types of animals on each continent?

A: Continental drift is the answer. Each continent broke away at different times from the original single land mass. For instance, Australia broke away before placental mammals were on Earth and so Australia has no indigenous placental mammals, only marsupials like kangaroos. (Placental mammals like us, have babies developing in the mother's womb, attached by a placenta).

Q: Science tells us that Australia broke from the original land mass millions of years ago. Was this before the time of the biblical Noah?

A: Yes, this was long before the biblical Noah and the biblical flood of 2456 BC.

Q: If the biblical flood had covered the whole earth, how could Noah have collected animals from Australia and returned them there after the flood?

A: Clearly Noah could not have done this.

Q: Do you agree that the biblical flood could not have covered the whole Earth?

A: Hopefully you can agree with this conclusion.

Q: Is there scientific evidence for an enormous flood in a major part of the Middle East?

A: Yes, we have found the remains of ancient buildings under the Black sea, just north from modern day Turkey.

Q: Where is the most likely area for Noah's flood?

A: It is a vast area of lowlands, stretching from north of the Balkan Peninsula in the west, through the present Black and Caspian Seas and even further east.

Q: If the pre-flood civilization of Noah's time was situated where the present Black Sea is situated, then could the whole of civilization have been wiped out, except for Noah and his family?

A: Yes, This is the most likely explanation for the biblical flood.

Q: Can all the fossils, that science has found in ancient rocks around the world, be explained by the biblical flood?

A: Clearly not so. Firstly, because of the evidence that this flood was not world-wide. Secondly, because the fossils clearly show that the oldest rocks contain more primitive creatures than more recent rocks. The fossils were not caused by a single event.

Q: Science tells us that water always finds its level. If there had been a worldwide flood covering all dry land, where could the water run to, so that dry land could again appear?

A: Clearly, the flood water had to drain away somewhere and this is further evidence against a world-wide flood.

Q: When does archaeology show that the Sumerian civilization started spreading beyond the Middle East?

A: This spreading out started about 2000BC.

Q: How long after the biblical date for the flood does archaeology show that this civilization started moving outwards from the Middle East?

A: The biblical flood was 2456 BC and by 2000 BC civilization started moving outwards from the Middle East, and so it was about 500 years after the date of the biblical flood.

Q: How many people can develop from three men and three women (Noah's sons and wives) over a 500 year period?

A: If three women each have six children, three of whom are girls, and each girl has three other surviving girls by the age of 40, this equals 27 girls. If this trend continues every 40 years for 500 years we reach at least 500,000 women and probably at least 500,000 men.

Q: Can we accept that the biblical account of Noah and the flood is firmly based in real history?

A: Yes, it is certainly written within an historical context.

Q: Is the biblical account accurate?

A: It is amazingly accurate, provided we accept that the original account allows for several legitimate alternative translations of some key Hebrew words, such as ‘adamah’ and ‘erets’.

Q: Could Noah have written the flood account himself and this was later copied by Moses, when he wrote the first four books of the Bible?

A: Archaeology has found complex Cuneiform writing on clay tablets from at least 3000BC. In other words, at least 500 years before the date of the flood. There is therefore no reason why Noah could not have written the account himself.

Q: Where could Moses have obtained Noah’s account of the flood?

A: Moses was raised as a Prince of Egypt about 1000 years after Noah’s time. He was given instruction in all the ‘wisdom of the Egyptians’. Archaeology shows that ancient Egypt had extensive libraries that very probably contained documents from all over the Middle East. It is therefore very possible that Moses found Noah’s original account or a copy in one of the Egyptian libraries.

Q: The Epic of Gilgamesh, written about 2000 BC, also describes a great flood and a miraculous escape of one man and his family. Could Moses have used this account as his source?

A: No, The evidence clearly points to the Gilgamesh account being a greatly embellished and changed version of the original Noah account and not the soberly worded account used by Moses.

3.2: THE GARDEN OF EDEN

Q: Where is the geographical location of the biblical Garden of Eden?

A: We read in the Bible that it was at the head waters of four rivers. Two of them have the same names today, namely the Tigris and Euphrates. The headwaters of both rivers start close together in the mountains of Turkey.

Q: The Bible account also says that this Garden was ‘eastwards’ in Eden. Does this help us to locate where the first civilization was situated?

A: Yes, it gives further support to the probability that the first civilization was situated where the ruins have been found under the Black Sea. The Garden of Eden is due east from this.

Q: Is the Garden of Eden associated with agriculture?

A: Yes, we read that Adam was placed there to tend to the garden.

Q: Where do genetic studies of our main food plants suggest that these plants originally came from?

A: Genetic studies trace the origin to the same area of Turkey where the Tigris and Euphrates start, namely the biblical Garden of Eden.

Q: Do these Archaeological and botanical studies suggest a real Garden of Eden?

A: Yes, they do suggest that it was in a mountainous part of modern Turkey.

Q: In the biblical description of creation, in Genesis chapter 1, on what 'day' or 'creative period' does it say that mankind, both male and female, were created?

A: On the sixth 'day' both male and female were created.

Q: In chapter 2 of the Genesis account, were Adam and Eve created on the same day?

A: No, we are told that, after Adam was created, he was given tasks to perform, including naming all the animals. This would have taken a considerable period of days. Only after this was Eve created.

Q: Does this suggest that the Garden of Eden events were different to the events of the sixth creative day?

A: Yes, it suggests that Adam and the Garden of Eden refers to one specific man and one specific locality, and the creation of Eve was a different event from that described in Genesis chapter one.

Q: What was so special about Adam and the Garden of Eden?

A: We suggest that God was using Adam and Eve and their descendants, to 'fast track' human-kind into their full potential, through personal 'hands-on' instructions.

Q: What human ability is key to all other learning and knowledge?

A: It is the possession of a complex language.

Q: Do scientific studies of the origin of language suggest one 'proto-language' or many first languages?

A: The evidence points to just one Proto language, from which all Indo-European languages have evolved.

Q: Is it possible that all human languages have a common source in this same proto-language?

A: Some language scientists suspect this to be the case.

Q: Does the appearance of just one proto-language suggest the slow evolution of language?

A: If language slowly evolved then we would expect many proto-languages arising from various isolated populations of mankind. One proto-language suggests one origin and scientifically nobody can give a satisfactory answer as to how. I suggest that God instructed Adam in the first complex language.

Q: Does the Bible speak of one original language splitting into all the others?

A: Yes, the biblical account suggests that this took place in the Sumerian culture centered around Babylon, sometime before 2000 BC.

Q: Can a child who is reared away from all contact with people ever learn to speak and behave like a human?

A: No, there are cases of babies being reared by wild animals. Unless they are found by humans when still young they can never become truly human, nor speak a complex human language.

Q: Does this example of a child being reared by animals, support the conclusion that a complex language cannot just evolve?

A: I believe this does strongly suggest that the sudden appearance of the first proto-language, was not an evolutionary event. Mankind was taught this language by someone.

Q: When do researchers, into the origin of language, suggest that the first complex proto-language appeared in the Middle East?

A: Some researchers suggest this was about 4000 BC. Before that time it is probable that mankind communicated through a variety of sounds and signs, not much advanced beyond what we see hints of in other higher primates today, such as chimpanzees.

Q: When, according to archaeology, did the first true cities appear and where?

A: The first true cities, so far discovered, were in the border of Syria and Turkey, namely Tel Brak and Ebla. They are dated as starting about 4000 BC.

Q: What are the characteristics of a true city civilization?

A: The first true civilization was characterized by complex cities with diversified social infra-structure and diversified buildings. They also, for the first time, had writing, mining for metals, metal smelting and the first appearance of organized religion.

Q: What is the first archaeological evidence for organized religion?

A: The first evidence of complex religious beliefs were found at Ebla, dated about 3700 BC. The first written accounts date to about 2500 BC and include description of a monotheistic religion, suggesting monotheism existed before this time.

Q: If religion slowly evolved, would we expect belief in many gods and spirits or just one Creator?

A: The 'natural' tendency is to believe in many gods and spirits.

Q: Does the appearance of Monotheistic religion, near the start of civilization, support the Genesis account, where it is made clear that there was direct instruction of Adam by God?

A: This Monotheism, so early in civilization, goes against theories on the evolution of religion from polytheism to monotheism. The Genesis account is therefore a likely explanation.

Q: When does the Bible say that organized religion started?

A: The Bible states that Adam's son Seth was father to Enosh and it was only after Enosh's birth that *'men started to call upon the name of the Lord'*. The biblical date for the birth of Enosh is only 157 years before the archaeological date for the first organised religion discovered thus far.

Q: Does the Bible say that Adam and Eve were the first people?

A: No it does not. The existence of others is indicated by four main biblical references. Firstly, the origin of Cain's wife, secondly, who were the people Cain feared would kill him if he was expelled from the Garden of Eden. Thirdly, who were the people who would live in the city that Cain was building after he left Eden? Fourthly, who were the 'sons of God', the 'daughters of men' and the 'Nephilim', mentioned in the biblical account?

Q: What does the Bible say was the origin of the 'Nephilim'?

A: They were the result of breeding between the 'sons of God' and the 'daughters of men'.

Q: Who were these 'sons of God'?

A: The Bible never calls angels 'sons of God'. However, in many places people who have a close relationship with God are called sons and daughters of God. It is therefore very likely that these 'sons of God' were the Adamic family and the 'daughters of men' were other mankind.

Q: Are the Nephilim spoken of in other places in the Bible?

A: Yes, many hundreds of years later when the Israelites were conquering Canaan.

Q: Does the Bible state where these Canaanite Nephilim came from?

A: Yes, it clearly traces their origin step by step to one of Noah's sons, Ham. He had a son called Canaan, Canaan had a son called Heth. Heth gave rise to Arba and Arba was father to Anak, and the Anakites gave rise to the later generations of the Nephilim.

Q: Does this mean that Noah's son Ham or his wife had some genetics carried over from pre-flood people?

A: Yes, it suggests that some Nephilim genes were passed on via Noah's family, and over the following hundreds of years, Nephilim-like people were born and some of these inter-married, resulting in whole tribes with Nephilim characteristics.

Q: What was the main characteristic of the Nephilim?

A: They were exceptionally large people, referred to as 'giants'.

Q: Can you give an example of a Nephilim in the days of the biblical King David?

A: Yes, Goliath was from the Nephilim of the Gath region. The Bible states that the invading Israelites destroyed the Nephilim (Anakites) nations, but it specifically states that they remained in a few areas such as Gath (Joshua 11:21).

Q: Since Adam was not the first man-like creature, where did he come from?

A: The biblical account says that God made Adam from the dust of the ground. This is a statement of the materials in our bodies, namely the minerals of the earth. It is not a statement of God making a clay statue and then bringing it to life.

Q: Could God have made Adam by taking him from pre-Adamic genetics?

A: We can partly answer this question by looking at how the Bible says that God made Eve. He took something from an already living Adam and from this small part of Adam he formed Eve. So, clearly it is possible that God may have made Adam in a similar manner, by taking pre-Adamic genetics and from it forming Adam.

Q: What spiritual truths were being demonstrated in the Garden of Eden?

A: God was for the first time presenting mankind with moral choices. Man was only now able to make such choices because God had upgraded his understanding, firstly, by teaching him the first complex language and secondly, by giving him a new spiritual dimension, by breathing into him his Holy Spirit.

Q: What is the Bible definition of 'sin'?

A: Sin is defined as breaking a law or standard given by God.

Q: Was it possible to sin before a law was given from God?

A: No. By definition sin is coming short of a standard set by God.

Q: So, when Adam and Eve sinned, by disobeying God's command, were they the first of mankind to sin?

A: Yes, they were the first humans to commit a sin.

Q: Does this mean that harmful things were not in the world until Adam and Eve sinned?

A: No, there were many harmful things in the world but they were not classified as sin.

Q: The Bible states that Adam and Eve, after they had sinned, would have to get their food by hard work and they would have to battle against thorns and other hardships. Does this mean that thorns were only created after Adam and Eve sinned?

A: No, the Bible clearly states that God had completed all of his creation by the sixth creative period and all this was before the Garden of Eden events. Adam and Eve only encountered thorns for the first time when they were expelled from the specially planted Garden of Eden.

Q: Does this suggest that the Garden of Eden was unlike other places on earth?

A: Yes, the Bible says that God planted this 'special garden' for a special test or demonstration. He wanted to demonstrate whether mankind, when placed in an ideal environment, would still choose to disobey His instructions.

Q: Was God demonstrating, through the Garden of Eden events, that mankind could not save themselves from the cosmic rebellion camp, controlled by Satan and his rebellious angels?

A: It does seem that God was demonstrating that he would have to initiate another plan of saving mankind from the control of Satan. That plan was to unfold down through the centuries, as God directed human history towards his solution.

3.3: THE ORIGIN OF DEATH

Q: Did physical death only enter the world when Adam and Eve sinned?

A: No, physical death, storms, tornadoes and earthquakes were a part of life on earth right from the dawn of life. We see abundant evidence of this in the ancient fossils of long dead living things, and in the study of geology.

Q: Was Adam created mortal or immortal?

A: The Bible says he was made from dust, just like all the other animals. All were given the 'breath of life' and all were given food to eat. This suggests mortality.

Q: The Bible says that God told Adam and Eve "*In the day that you disobey you will surely die*". However, they did not die physically for many years after they sinned. So what sort of 'death' was God talking about?

A: The Bible is here talking about 'spiritual death', not physical death.

Q: In other parts of the Bible it speaks of Eternal Life or an Eternal Life relationship. What is the definition of such a relationship?

A: Eternal Life is defined as a personal relationship with God that can start here on earth but survives physical death.

Q: So where did pain and death originally come from?

A: If we accept the overwhelming evidence of science, and the thousands of ancient fossils of animals, then pain and death has been a feature of life on Earth right from the dawn of life.

Q: Does this force us to believe that Adam and Eve died spiritually, not physically when they sinned?

A: All the evidence points to Adam and Eve being created mortal right from the start. However, before they sinned they had a very close and personal relationship with God that is described as an Eternal Life relationship.

Q: What about pain? Did God create us to have pain?

A: Yes, pain is an essential part of life on Earth. Without our sense of pain we would not know when we were being harmed or when our hand was in a fire.

Q: Are we justified in interpreting the Bible account as saying that physical death came into the world due to the sin of Adam and Eve?

A: No. Such an interpretation runs contrary to all the evidence.

DVD 4: BIG BANG AND CHRISTIANITY

BIG BANG CHRISTIANITY

Q: The biblical King David wrote many psalms, including Psalm 19, *The heavens declare the glory of God, the skies proclaim the work of his hands. Day after day they pour forth speech, night after night they display knowledge.* Can we accept that the Universe is speaking to us about God?

A: The Universe clearly speaks to us about the greatness and wisdom of God the Creator.

Q: Has science greatly increased this ‘voice of God’ speaking to us from creation?

A: Science has enabled us to understand the wisdom and greatness of God in far greater measure, through our powerful telescopes and our understanding of the microscopic infra-structure of matter.

Q: Has Christianity sometimes resisted the revelations about the Universe given to us by scientific discovery? Can you give a Middle Ages example?

A: Middle Ages Europe accused Galileo of heresy because he confirmed, through the newly discovered telescope, that the Earth orbited the Sun, whereas the church said that the Bible says that everything revolves round the Earth.

Q: Is a section of the Christian church resisting discoveries of science today? Can you give an example?

A: A large group of Christians feels that they must keep to one interpretation of Scriptures that suggests to them that God created everything about 6000 years ago over a period of six Earth days. This is totally in conflict with the discoveries of science as outlined in this DVD series. This group of people are sometimes called ‘Creationists’.

Q: Has God’s revelation to mankind been given only once and never added to?

A: No. God’s revelations to mankind have come in stages. For instance, to Abraham and the patriarchs, then to Moses and the Israelites, then through the Old Testament prophets, then through Jesus, and then again we expect new revelations as biblical prophecies come to pass. Each new revelation has added depth and meaning to earlier ones. Jesus even corrected some, such as the Mosaic morality of ‘an eye for an eye and a tooth for a tooth’. Instead he taught a higher revelation of “love your enemy and do good to those who mistreat you”.

Q: Is there any reason why God’s revelations about the Universe should not change?

A: God gave humanity intellect and creativity and he has enabled us to develop amazing scientific instruments, so as to reveal great mysteries about his wisdom and power, that were hidden from earlier generations. The ‘voice of God’ speaking to us from the heavens, has been enlarged into a ‘mighty shout’ by the discoveries of science. In a very real sense God’s revelations about himself are continuing to be expanded.

Q: Have any discoveries of science changed the Christian Gospel message?

A: Not at all. Irrespective of any debate about the age of the Earth or the origin of death, the fact remains that all of us are today most definitely mortal and destined to die. To us comes this glorious message, *For God so loved the world, that he sent his only begotten son that whosoever believes in Him, should not perish but should have Eternal Life* (John 3:16).

Q: What does the Genesis account say about Adam and Eve and their mortality?

A: The Genesis account emphasizes that Adam was made from dust, as were all the other animals and to dust they will return. Mankind were also told what to eat, just like all the other animals. This clearly speaks of mortal bodies that need food to maintain themselves.

Q: What does the New Testament say about Adam's body?

A: Paul writes in 1 Corinthians 15, *The first man was of the dust of the earth. A bit later he writes, I declare to you, brothers, that flesh and blood cannot inherit the kingdom of God, nor does the perishable inherit the imperishable.* I believe Paul had a clear understanding that Adam was created as flesh and blood and mortality.

Q: But doesn't it say in Romans chapter 5 that death came through Adam?

A: Yes, this is what Paul wrote. However, throughout Romans chapters 5, 6, 7 and 8, Paul speaks of living people being either 'dead' or 'alive' depending upon their relationship to God. Often the word 'death' is being used to refer to the 'spiritual death' that comes when we follow our own desires and turn our backs on God. For instance, we read, *The mind of the sinful man is death, but the mind controlled by the Spirit is life and peace* (Romans 8:6). In other words, Romans 5 can be understood to mean that spiritual death came to humanity, initially through the sin of Adam and Eve. Before Adam there was no law from God to break and sin is defined as breaking such a law. A full discussion of Romans chapter 5 is found in my book 'Big Bang Christianity'.

Q: Why is it important to look carefully at what the Bible says about the different types of 'death'?

A: This is very important because there is so much evidence showing that physical death has been a fundamental feature of life on Earth right from the beginning. If we insist on a Bible translation, that says physical death was the result of Adam and Eve sinning, this places an enormous stumbling block in the way of most people.

Q: What does the New Testament say about Jesus being the Second Adam?

A: In 1 Corinthians 15 the two Adam's are compared. Clearly Jesus, as the Second Adam, came to reverse what was lost by the first Adam in the Garden of Eden. Firstly, he opened the way for us to be restored to a position of 'sinlessness' before God, through the merit of his shed blood. Secondly, he restored us to the status of 'sons and daughters' of God. Thirdly, he restored us to the same 'Eternal Life relationship' with God that Adam and Eve had before they sinned. Fourthly, he restored us to the status of 'a New Creation' in Christ Jesus.

Q: Why did Jesus not restore us to physical immortality, since he restored everything else that was lost in the Garden of Eden?

A: The clear answer is because mankind never were physically immortal.

Q: Did Jesus clarify the difference between physical and spiritual death?

A: Jesus made it very clear that “*I am the resurrection and the life, whoever believes in me, though he may die nevertheless he shall live, and whoever lives and believes in me will never die*” (John 11: 25). Clearly all those who heard him say these words are long dead - physically, but they never died ‘spiritually’. Jesus is saying that the Eternal Life relationship with Father God, that is the gift of God to those who believe, can start here on Earth but it continues uninterrupted into eternity. This is the Eternal Life spoken of in the New Testament. It is the same Eternal Life relationship that Adam and Eve experienced in the Garden of Eden before they sinned.

Q: Then why does the Bible speak of the resurrection of the dead?

A: This is because our Eternal Life reality will be given a new supernatural (quantum dimension) body, just like that of the risen Jesus. Our mortal bodies must be replaced with immortal bodies. As Paul said, *Flesh and blood cannot inherit immortality*. Furthermore, our New Dimension bodies do not need the dust in our coffins or the dust of ancient bodies, blown to the winds over the centuries. God can give us new supernatural bodies from anywhere in the Cosmos.

Q: Why does the scripture speak of the dead ‘rising’ at the ‘end of the age’ while to the dying thief on the cross Jesus said “*Today you will be with me in Paradise*”?

A: Part of the confusion may be due to us being locked into time, but when we die physically we enter the Timeless Dimension. The spirit of the thief went straight into the presence of Jesus in a place or situation called Paradise. However, from our time bound view of events, there seems to be a gap between our Eternal Life reality entering Paradise and our receiving of a new supernatural body, at the final ‘resurrection of the dead’.

Q: What does this new look at scripture and scientific discovery tell us about the ‘goodness’ of creation, as initially brought about by God?

A: It tells us that the use by God of the word ‘good’ may not mean the same as we think it should. The original Hebrew word translated as ‘good’ in the Genesis account, is ‘tob’. Other legitimate alternative translation of this word is ‘better’, ‘best’, ‘goodly’. In other parts of the Bible this word is translated as ‘better’ 71 times, as ‘best’ 8 times and as ‘goodly’ 11 times.

Q: When God said that each stage in his creative acts was ‘good’, could this mean that it was good for that stage in his creation? In other words, what had been created fully met the needs for that period in Earth’s history?

A: Earth has gone through a series of stages since life was first created. Each stage needed different plants and animals, so as to achieve a balance between predators and prey and between herbivores and the vegetation. The age of dinosaurs was needed in order to control the lush vegetation of that period. However, in order for mammals to

thrive and mankind to exist on Earth it was necessary for dinosaurs to become extinct. God has acted progressively throughout Earth's history and the end goal was always mankind. God looked at this progressive unfolding of his ultimate goals and said it is good. The Genesis account can read, *And God saw that it was exactly as he planned it to be.*

Q: Does a Universe containing pain and mortality, conflict with God's revealed attributes of being just, merciful and loving?

A: This depends on the context that this question is being asked. Events in our life experience may seem to us unjust and unloving, but our lives are just a transient 'mist' on the webpage of eternity. It is only after we reach our final eternal destiny in the Timeless Dimension, that we may be in a position to better understand the justice, mercy and love of God. It is only then that we will fully know how God is going to 'balance the balances'.

Q: Can there be events within a Timeless Dimension?

A: Being in a Timeless Dimension does not have to mean that time ceases to exist. It can mean that anyone within such a dimension, such as God himself, is independent from time. He can instantly move to any point on our arrow of time, either into our past, our present or our future.

Q: Does scripture say that Jesus will be the judge of all humanity at the final Judgment Day?

A: Yes, Jesus himself told us that he had been appointed by Father God to be the Judge.

Q: Does scripture tell us how Jesus will judge?

A: Yes, through many of the words of Jesus himself. For instance, many statements by Jesus show that what we have done will be judged in the light of what we knew we should have done and those of us who received the most opportunities will be held more responsible than those who never had those opportunities. For instance, he spoke to the people who had seen most of his miracles and condemned them for still not believing in him. He said "*It will be better for the men of Sodom at Judgment day than for you*" (Matthew 11:20). The men of Sodom are a biblical example of behaviour that God condemned. They all died when Sodom was destroyed with fire. However, they and all of humanity still face a second judgment on Judgment Day, by a just, merciful and compassionate Jesus. If we want to know more about the justice, mercy and love of God we only have to read the words and actions of Jesus in the four Gospels.

Q: Why could an almighty God not have created a Universe for mankind that did not have earthquakes, hurricanes, tornadoes and floods?

A: Scripture contains examples of where God has voluntarily limited himself. For instance, he created angels to be immortal and indestructible. This meant that he voluntarily limited his options for dealing with a rebellion led by Satan. He could not destroy them because he had limited himself by creating them immortal. Therefore he planned to ultimately confine them to a place or dimension called Hell. We simply do

not know whether any other sort of Universe could have been suitable for God's eternal plans for creatures such as mankind. Certainly science tells us that our Universe seems to be ideally and very specifically designed for us to exist. Maybe it is the only possible Universe for mortal life such as us. However, we can be certain that God's ultimate plans for humanity are what led him to make the decisions that actually led to us being in this sort of Universe and on this sort of Earth. We will only fully understand this when we look back on Earth's history from an eternal viewpoint.

Q: Is Christianity today at an historical watershed or 'valley of decision', as important and far reaching as the Reformation of the early 1500's in Europe?

A: Christians who continue down the road of fighting science, in order to try and cling onto one interpretation of scripture, demanding acceptance of a 6000 year old Earth and a six literal day creation, are increasingly going to alienate many in our generation. However, those Christians who are prepared to look again at traditional interpretations, many of which only arose in the Middle Ages, and move ahead and in step with the 'voice of God', that is 'shouting' to us in this scientific and technological age, will enable the removal of an enormous stumbling block in the path of many sincere seekers after God. The scriptures have been relevant to every age and generation. However, in order to remain relevant they need to be constantly re-examined and re-interpreted. The scripture remains 'our ultimate authority in all questions of faith, doctrine and practice', but God's revelation to mankind continues to throw new light on how we interpret the centuries old inspired writings of the great saints of previous generations.

Q: Can a Scientist, such as myself, still believe in all the fundamentals of a Bible-based Christianity?

A: The answer is certainly 'yes'. To see how I, as a scientist, reconcile my Christian faith with scientific discovery, look at the **second part of DVD 4** or look at my book '**Big Bang Christianity**.'

I am not claiming that my understanding of Christianity is the only valid one in every detail. However, I believe it may be helpful to use my own understanding of these issues as an example, to see how belief in the authority of the Bible can be reconciled with all of the implications that follow from acceptance of an ancient Universe filled with on-going evolutionary processes.

See below for a list of the above questions (without the answers): 'Suggested test for learners'.

SUGGESTED TEST FOR LEARNERS

Below are all the questions asked in the above sections but without the answers

DVD 1 : Creation

SIZE AND AGE OF UNIVERSE

Q: What is a Light Year?

Q: How fast does light travel in a vacuum?

Q: What is a galaxy?

Q: How many stars are found in an average sized galaxy.

Q: What is the average distance across one galaxy?

Q: What is the distance to the galaxies furthest from our own galaxy?

Q: For how many Earth years has light reaching our telescopes, been traveling through Space, from galaxies about 12 billion Light years away?

Q: How do scientists calculate when the Big Bang Creation took place?

Q: The Big Bang was started and controlled by laws that existed before our Universe.
What do we call such laws?

Q: When did time begin?

Q: Are the Transcendent Laws limited by time?

Q: Who does the Bible say created the Universe?

Q: Does the Bible say that God exists outside of time?

Q: Does the Bible say that God existed before our Universe came into existence?

QUANTUM PHYSICS AND THE TIMELESS DIMENSION

Q: What does the science of quantum physics (quantum mechanics) study?

Q: Is all the matter in our Universe, including our own bodies, made up from atoms?

Q: Can we see atoms with our naked eyes or a microscope?

Q: Why do scientists talk of ‘non-locality’ or ‘entanglement’?

Q: How many dimensions make up our experience of the Universe?

Q: Why do we need to believe in another dimension called the Timeless Dimension?

Q: Is the space between stars and galaxies actually empty?

Q: Do we know how much Dark Energy there is in the Universe?

THE CREATOR?

Q: Can we ever get something from nothing?

Q: What is the statistical probability that our Universe is the result of pure chance?

Q: What example can help you visualize how minute is the statistical probability that we are here by accident?

Q: Science tells us that time and the matter of our Universe came into existence at the Big Bang Creation. What existed before the Big Bang?

Q: If some things existed before the Big Bang Creation, what do we call these things?

Q: Does this mean that the Timeless Dimension and its laws are ‘transcendent’?

Q: Does this mean that the Big Bang Creation came out of the Timeless Dimension, and the Transcendent Laws that operate in that dimension?

Q: What other evidence suggests that our Universe is controlled by the Timeless Dimension?

Q: Because our Universe is controlled by the Timeless Dimension, does this mean that the laws of physics, that operate in our Universe, are ultimately controlled by the Transcendent Laws of the Timeless Dimension?

Q: Does this mean that God is in control of every detail in our Universe?

Q: Can God actually control every detail of the history of our Universe?

Q: When we study the activity of sub-atomic particles, they seem to behave in a chaotic manner. Is this really chaotic or merely our time-based view of a Timeless reality?

Q: Is the apparent ‘chaos’ in the sub-atomic reality very sensitive to inputs of energy?

THE AGE OF OUR EARTH

Q: How old, according to science, are the oldest rocks on Earth?

Q: How do we study the age of rocks?

Q: Is it possible that the rate of radioactive decay could have been much faster previously and so give us the impression that rocks are much older than they actually are?

Q: Why is it not possible to speed up radioactive decay more than slightly?

Q: About how fast do continents move?

Q: How long would it have taken Africa and South America to move apart?

Q: Do these movements of continents cause earthquakes?

Q: Does the distribution of animals and plants support evidence for continental drift?

Q: Why does Australia have many species of marsupial animals but no placental mammals?

Q: What creates the oxygen in our atmosphere?

Q: Approximately how long would it have taken for the oxygen levels to rise to the present level if the Earth was covered with green plants?

Q: What is coal made from?

Q: Did it take thousands of years or millions of years to create our coal deposits?

Q: Are coal deposits (seams) typically in one layer or in several layers, separated by other types of deposits?

Q: Could these layers have been caused by one geological or catastrophic event?

Q: What are continents floating on?

Q: As mountains are slowly eroded away by weather, do they rise?

Q: What evidence do we have that mountains slowly rise?

Q: How many years of accumulated snow have been drilled through in Antarctic ice?

Q: How do scientists know the age of ice removed from cores drilled down into Antarctic ice?

Q: What do we find in Antarctic rocks below the ice?

Q: What do these fossil amphibians tell us about Earth's history?

Q: What is your conclusion: Are our continents only thousands of years old or are they millions of years old?

DVD 2: IRREDUCIBLE COMPLEXITY

UNDERSTANDING THE THEORY OF EVOLUTION

Q: What is Charles Darwin most famous for?

Q: Did Darwin believe in God?

Q: Does science know how the first life appeared on Earth?

Q: Since the time of Darwin, has science revealed life to be simpler or more complex than understood by Darwin?

Q: What is the genetic code of all life?

Q: What is the DNA made up from?

Q: Is the DNA of all animals the same?

Q: Do we have the same amount of DNA in each of our cells as is found in a single-cell bacterium?

Q: How much information is stored in our human DNA?

Q: Why are children from the same parents usually all different in appearance and abilities?

Q: What is a mutation?

Q: Do mutations usually lead to new types of animals?

Q: Are mutations chance events?

Q: Is environmental selection a chance event?

Q: Has science demonstrated that a species can develop over time into one or more other similar species?

Q: Do these new species have the same amount of DNA as their parent species?

Q: Is the Peppered moth an example of the environment selecting for change in a species?

Q: What do the Black-backed Gull and Herring Gull demonstrate about evolution?

Q: What are the Galapagos Island finches demonstrating?

Q: How many species of Cichlid fishes are found in Lake Victoria?

Q: How old is the Lake Victoria water system?

Q: Does this mean that all these new species of Cichlid fishes developed within one million years?

Q: Do all these Cichlid fishes have the same amount of DNA genetic material in their body cells?

Q: Because we can demonstrate evolution leading to new species, does this have to mean that the same process has led to all the variety of life on earth?

WHAT DO THE FOSSILS TELL US?

Q: Do the fossils show a long series of intermediate fossils between major groups, such as between invertebrates and vertebrates or between fishes and amphibians or amphibians and reptiles?

Q: Are genetic studies increasingly questioning the 'evolutionary trees' previously proposed to link various categories of living things?

Q: What geological period showed the greatest variety of new animals?

Q: Did the Cambrian period fossils appear suddenly in the rocks or have we found older fossils that might have been ancestors to them?

Q: Is this gap in fossils, before the Cambrian period, due to the fossil record being very incomplete?

Q: What does the fossil called *Archaeopteryx* tell us about the evolution of birds from reptiles?

Q: What does the fossil of the *Coelacanth* fish tell us about evolution?

Q: A recent discovery was a fossil called *Tiktaalik roseae*. Is this a ‘missing link’ between fishes and amphibians?

Q: Why have we only ever found this one example of an animal with fish and amphibian features?

Q: Recently a lemur-like fossil was found called *Darwinius masillae* and nick-named ‘Ida’. Widespread publicity in the media hailed this as the ‘missing link’ between mankind and much more primitive animals. Was it actually a ‘missing link’?

Q: What does this media hype about ‘Ida’ tell us about science and the un-scientific? public?

Q: How do strange animals like the Duck-billed Platypus make us cautious about claiming fossils to be ‘missing links’? (They are warm blooded mammals with hair, but lay eggs, have webbed feet, and a duck-like bill).

Q: What is the main difference between the evolution of one species from another and the evolution of a more complex animal from a more primitive one?

IRREDUCIBLE COMPLEXITY

Q: What do we mean by saying that an organ, such as the human eye, is ‘irreducibly complex’?

Q: For a complexity, such as the human eye, to develop from a simple light sensitive cell, means that each minute step in its development would need to be selected for by some advantage to the animal. Do the fossils support such a development of the eye?

Q: Are there many examples of ‘Irreducible Complexity’?

PERSONAL VIEWPOINT

Q: Does the discovery of processes and mechanisms do away with the need for a designer of the processes and mechanisms?

Q: Does the existence of so-called ‘genetic upgrades’ between simpler and more complex organisms, suggest the intervention of the mind of God?

Q: How do you think God could have periodically brought about a ‘genetic upgrade’ and started ‘jump started’ life in a new direction?

Q: Does belief in God require a step of faith?

Q: Since the statistical probability of us being here by chance is so amazingly small (smaller than 1 in 10^{55}) doesn’t this actually prove that God is real and is behind all the amazing discoveries of science?

Q: Is there an alternative view that removes the need for belief in God?

Q: Is there any evidence for the Multiverse Theory?

Q: Is there evidence that God planned and brought into being our unique Universe?

Q: What are some of the other lines of evidence in support of God?

RELATIONSHIP TO ANCIENT DOCUMENTS

Q: What single event about 200 years ago started western civilization on a path away from belief in the Bible?

Q: Has the attitude of some religious people harmed progress?

Q: Does the Bible account of Creation allow us to believe in creation over long ages of time?

Q: What language was the Bible account of creation written in?

Q: Can the Hebrew word for ‘day’ be translated in various ways?

Q: In how many other places in the Bible is this word for ‘day’ translated as a ‘period of time’?

Q: In the Bible account, when God separated the night from the dark, what did he call the ‘light’ period?

Q: In chapter one of Genesis, each creative ‘day’ is ended off with the words “*and there was evening and there was morning, the first day*”, and likewise for each of the six creative ‘days’. If this is referring to a 24 hour day, what portion of the day is spoken about here?

Q: In chapter two of the Genesis account, how many events are included in one ‘day’?

Q: How many different ways is the word ‘day’ used in the first two chapters of the Bible?

Q: Is there any reason why God cannot compare an earth day with a far longer period in his agenda?

Q: Can you give another example of God comparing a longer period with an earth day?

Q: Is there any reason why God cannot call each of his great creative periods a ‘day’?

Q: Are there words in the Creation account that suggest long periods of time?

Q: Is it acceptable to translate each Bible creative day as follows: “*Thus the end (evening) of the first ‘age’ (yom) came, and the dawning of the new ‘age’ (yom) began*”?

Q: Is the order of creation, as outlined in the Genesis account, in agreement with the order revealed by science?

Q: How do we reconcile the Genesis account where it says that on the fourth creative 'day' "*God 'made' two great lights – the greater to govern the day and the lesser light to govern the night. He also made the stars*". These were for "*determining times and seasons*" Science tells us that the stars, sun and moon, were there long before this period on earth?

Q: In what creative period does the Genesis account say that birds appeared?

Q: Does science agree that the early earth was covered with sea, as described in the Genesis account?

Q: Overall, is the Genesis account of creation a remarkable pre-scientific description of creation on Earth?

DVD 3: HUMANITY

THE FLOOD

Q: What is the biblical date for a great flood in the time of Noah?

Q: Where does archaeology place the origin of the first true civilization?

Q: When does archaeology say that the first civilization started moving out from its Middle East origin?

Q: At the biblical time of the great flood, where was civilization still located?

Q: Does the Bible say that the flood covered the whole world?

Q: About how many types of mammals and birds are in the world?

Q: How many species of insects are there?

Q: Could fresh water organisms survive a world-wide flood?

Q: How many types of dinosaur have been discovered in the fossils?

Q: How heavy were the biggest dinosaurs?

Q: Approximately how many square meter floor space was in the biblical Ark?

Q: How long, according to the Bible, were Noah and the animals in the Ark?

Q: What average requirement for fresh water would be needed for all the mammals and birds?

Q: How much fresh water would be needed by just 11,200 species of mammals and birds for one whole year?

Q: What percentage of Ark space would be taken up by fresh water?

Q: How much food would be needed for all these animals for one whole year?

Q: Does logic require that the Ark was floating on fresh water and did not contain all the animals in the world?

Q: What is the scientific explanation for very different types of animals on each continent?

Q: Science tells us that Australia broke from the original land mass millions of years ago. Was this before the time of the biblical Noah?

Q: If the biblical flood had covered the whole earth, how could Noah have collected animals from Australia and returned them there after the flood?

Q: Do you agree that the biblical flood could not have covered the whole Earth?

Q: Is there scientific evidence for an enormous flood in a major part of the Middle East?

Q: Where is the most likely area for Noah's flood?

Q: If the pre-flood civilization of Noah's time was situated where the present Black Sea is situated, then could the whole of civilization have been wiped out, except for Noah and his family?

Q: Can all the fossils that science has found in ancient rocks around the world, be explained by the biblical flood?

Q: Science tells us that water always finds its level. If there had been a worldwide flood covering all dry land, where could the water run to, so that dry land could again appear?

Q: How long after the biblical date for the flood does archaeology show that civilization flourished, centered near Babylon in modern Iraq?

Q: How many people can develop from three men and three women (Noah's sons and wives) over a 500 year period?

Q: When does archaeology show that this Sumerian civilization started spreading beyond the Middle East?

Q: Can we accept that the biblical account of Noah and the flood is firmly based in real history?

Q: Is the biblical account accurate?

Q: Could Noah have written the flood account himself and this was later copied by

Moses, when he wrote the first four books of the Bible?

Q: Where could Moses have obtained Noah's account of the flood?

Q: The Epic of Gilgamesh, written about 2000 BC, also describes a great flood and a miraculous escape of one man and his family. Could Moses have used this account as his source?

THE GARDEN OF EDEN

Q: Where is the geographical location of the biblical Garden of Eden?

Q: The Bible account also says that this Garden was 'eastwards' in Eden. Does this help us to locate where the first civilization was situated?

Q: Is the Garden of Eden associated with agriculture?

Q: Where do genetic studies of our main food plants suggest that these plants originally came from?

Q: Do these Archaeological and botanical studies suggest a real Garden of Eden?

Q: In the biblical description of creation in Genesis chapter 1, on what 'day' or 'creative period' does it say that mankind, both male and female, were created?

Q: In chapter 2 of the Genesis account, were Adam and Eve created on the same day?

Q: Does this suggest that the Garden of Eden events were different to the events of the sixth creative day?

Q: What was so special about Adam and the Garden of Eden?

Q: What human ability is key to all other learning and knowledge?

Q: Do scientific studies of the origin of language suggest one ‘proto-language’ or many first languages?

Q: Is it possible that all human languages have a common source in this same proto-language?

Q: Does the appearance of just one proto-language suggest the slow evolution of language?

Q: Does the Bible speak of one original language splitting into all the others?

Q: Can a child who is reared away from all contact with people ever learn to speak and behave like a human?

Q: Does this example of a child being reared by animals, support the conclusion that a complex language cannot just evolve?

Q: When do researchers into the origin of language suggest that the first complex proto-language appeared in the Middle East?

Q: When, according to archaeology, did the first true cities appear and where?

Q: What are the characteristics of a true city civilization?

Q: What is the first archaeological evidence for organized religion?

Q: If religion slowly evolved, would we expect belief in many gods and spirits or just one Creator?

Q: Does the appearance of Monotheistic religion right at the start of civilization support the Genesis account, where it is made clear that there was direct instruction of Adam by God?

Q: When does the Bible say that organized religion started?

Q: Does the Bible say that Adam and Eve were the first people?

Q: What does the Bible say was the origin of the 'Nephilim'?

Q: Who were these 'sons of God'?

Q: Are the Nephilim spoken of in other places in the Bible?

Q: Does the Bible state where these Canaanite Nephilim came from?

Q: Does this mean that Noah's son Ham or his wife had some genetics carried over from pre-flood people?

Q: What was the main characteristic of the Nephilim?

Q: Can you give an example of a Nephilim in the days of the biblical King David?

Q: Since Adam was not the first man-like creature, where did he come from?

Q: Could God have made Adam by taking him from pre-Adamic genetics?

Q: What spiritual truths were being demonstrated in the Garden of Eden?

Q: What is the Bible definition of 'sin'?

Q: Was it possible to sin before a law was given from God?

Q: So, when Adam and Eve sinned, by disobeying God's command, were they the first of mankind to sin?

Q: Does this mean that harmful things were not in the world until Adam and Eve sinned?

Q: The Bible states that Adam and Eve, after they had sinned, would have to get their food by hard work and they would have to battle against thorns and other hardships. Does this mean that thorns were only created after Adam and Eve sinned?

Q: Does this suggest that the Garden of Eden was unlike other places on earth?

Q: Was God demonstrating, through the Garden of Eden events, that mankind could not save themselves from the cosmic rebellion camp, controlled by Satan and his rebellious angels?

THE ORIGIN OF DEATH

Q: Did physical death only enter the world when Adam and Eve sinned?

Q: Was Adam created mortal or immortal?

Q: The Bible says that God told Adam and Eve "*In the day that you disobey you will surely die*". However, they did not die physically for many years after they sinned. So what sort of 'death' was God talking about?

Q: In other parts of the Bible it speaks of Eternal Life or an Eternal Life relationship. What is the definition of such a relationship?

Q: So where did pain and death originally come from?

Q: Does this force us to believe that Adam and Eve died spiritually, not physically when they sinned?

Q: What about pain? Did God create us to have pain?

Q: Are we justified in interpreting the Bible account as saying that physical death came into the world due to the sin of Adam and Eve?

DVD 4: BIG BANG AND CHRISTIANITY

BIG BANG CHRISTIANITY

Q: The biblical King David wrote many psalms, including Psalm 19, *The heavens declare the glory of God, the skies proclaim the work of his hands. Day after day they pour forth speech, night after night they display knowledge.* Can we accept that the Universe is speaking to us about God?

Q: Has science greatly increased this ‘voice of God’ speaking to us from creation?

Q: Has Christianity sometimes resisted the revelations about the Universe given to us by scientific discovery? Can you give a Middle Ages example?

Q: Is a section of the Christian church resisting discoveries of science today? Can you give an example?

Q: Has God’s revelation to mankind been given only once and never added to?

Q: Is there any reason why God’s revelations about the Universe should not change?

Q: Have any discoveries of science changed the Christian Gospel message?

Q: What does the Genesis account say about Adam and Eve and their mortality?

Q: What does the New Testament say about Adam’s body?

Q: But doesn’t it say in Romans chapter 5 that death came through Adam?

Q: Why is it important to look carefully at what the Bible says about the different types of ‘death’?

Q: What does the New Testament say about Jesus being the Second Adam?

Q: Why did Jesus not restore us to physical immortality, since he restored everything else that was lost in the Garden of Eden?

Q: Did Jesus clarify the difference between physical and spiritual death?

Q: Then why does the Bible speak of the resurrection of the dead?

Q: Why does the scripture speak of the dead ‘rising’ at the ‘end of the age’ while to the dying thief on the cross Jesus said “*Today you will be with me in Paradise?*”

Q: What does this new look at scripture and scientific discovery tell us about the ‘goodness’ of creation, as initially brought about by God?

Q: When God said that each stage in his creative acts was ‘good’, could this mean that it was good for that stage in his creation? In other words, what had been created fully met the needs for that period in Earth’s history?

Q: Does a Universe containing pain and mortality, conflict with God’s revealed attributes of being just, merciful and loving?

Q: Can there be events within a Timeless Dimension?

Q: Does scripture say that Jesus will be the judge of all humanity at the final Judgment Day?

Q: Does scripture tell us how Jesus will judge?

Q: Why could an almighty God not have created a Universe for mankind that did not have earthquakes, hurricanes, tornadoes and floods?

Q: Is Christianity today at an historical watershed or 'valley of decision', as important and far reaching as the Reformation of the early 1500's in Europe?

Q: Can a Scientist still believe in all the fundamentals of a Bible-based Christianity?

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